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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,743

12/09/2003

Stephen H. Li

TI-36014

5121

23494

7590

06/20/2006

TEXAS INSTRUMENTS INCORPORATED

P O BOX 655474, M/S 3999

DALLAS, TX 75265

EXAMINER

HUYNH, KIM T

ART UNIT

PAPER NUMBER

2112

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/731,743	<b>Applicant(s)</b> LI ET AL.	
	<b>Examiner</b> Kim T. Huynh	<b>Art Unit</b> 2112	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12, 15-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 12, 15-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kelly et al. (US Patent 6,760,793)

As per claim 12, Kelly discloses an arbitration circuit for an output port, comprising:

- a FIFO queue(fig.8, 831 ie input buffer) containing a head pointer (col.4, lines 50-67) and a plurality of characterizing data for each packet received at an input port(col.8, lines 40-65), the queue forming a look-up table to determine which data will be sent out from the output port; (col9, lines 1-21)
- a plurality of arbitration circuits coupled to the look-up table for selecting the next packet to be sent out corresponding to a preselected characterizing datum (col.9, lines 1-48 ie arbiter selects packets via switch to output buffer sets wherein buffer sets implies table) wherein the head

pointer of the selected packet is utilized to select the packet from a common memory for the plurality of arbitration circuits. [(col.4, lines 50-65, ie a packet contain information transferring which allows differentiation of transactions from different devices) , (col.9, lines 35-48,), (col.10, lines 27-49, ie table 104 provided by the three buffer sets which provide transaction ordering)]

As per claim 15, Kelly discloses wherein the arbitration circuit is the arbitration circuit for one port of a PCI Express switch (fig.8, 801). (col.9, lines 1-48)

As per claim 16, Kelly discloses wherein the common memory is shared by all ports in the PCI Express switch. (col.9,lines 1-48 ie I/O interconnect)

As per claim 17, Kelly discloses wherein the common memory is a crossbar memory. (col.9, lines 1-48 ie x-bar switch)

As per claim 18, Kelly discloses wherein the crossbar memory is a common port, virtual channel or type memory. (col.9, lines 35-48 ie virtual channel)

As per claim 19, Kelly discloses wherein the PCI Express switch (fig.8, 801 ie switch) comprises:

- a plurality of ports; (fig.8, 863 ie I/O interconnect)

- a plurality of port controllers(fig.8, 859 ie interfaces), each controller being coupled to one of the ports;
- a local bus(fig.3, 311 ie internal bus) coupling the port controllers to a controller subsystem; and (col.4, lines 29-49)
- a single crossbar memory (fig.8, 833 ie x-bar switch) coupled to each of the port controllers and the controller subsystem, the crossbar memory serving as a common port or virtual channel memory for each of the port controllers. (col.9, lines 1-48)

As per claim 20, Kelly discloses wherein the crossbar memory is a common port, virtual channel or type memory. (col.9, lines 35-48 ie virtual channel)

As per claim 21, Kelly discloses wherein the crossbar memory is used as the replay memory by storing the head pointer in the port controller.(col.9, lines 1-48)

***Response to Amendment***

3. Applicant's amendment filed on 4/7/06 have been fully considered but does not place the application in condition for allowance.

a. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., utilizes a central cross-bar memory which eliminates the need for the duplication in the memory or using a single memory is utilized) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

**Conclusion**

**4. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

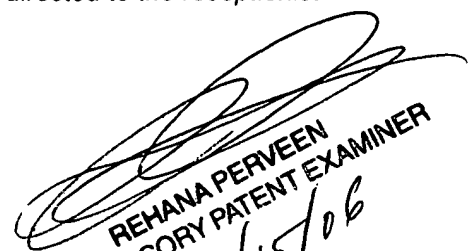
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571)272-3635 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 9:00AM- 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached at (571)272-3676 or via e-mail addressed to [rehana.perveen@uspto.gov].*

*The fax phone numbers for the organization where this application or proceeding is assigned are (571)273-8300 for regular communications and After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.*

Kim Huynh

June 15, 2006

  
REHANA PERVEEN  
SUPERVISORY PATENT EXAMINER  
6/15/06